

# Enterprise Resource Planning (ERP) Intention to Use for Decision Making Purpose in Higher Education Institutions in Nigeria

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## ABSTRACT

*The summary review of this research study it is as follows here, the main purpose of this work paper is to analysis the factor that affect the Integrated of Enterprise Resource Planning (ERP) in the purpose of perception to use ERP for decision making in higher education institutions in Nigeria. There are some factors that examined in this research work, which are: ERP Life Cycle development, Characterizing achievement, Enterprise system experience, ERP Implementation in HEIs, Organizational Theory Applications, ERP system in higher education, etc. Quantitative data was ensured for this study, and Nigeria higher education workers bark home was used as respondent in this work, a structured questionnaire survey was used to collect data from the respondents which are Masters and Phd final year student of UUM, USM and UNIMAP are using as the respondent for this study, which they're workers of various higher education institutions in Nigeria. Eleven different departments were selected and the population sampling focus is 200, which 85 Questionnaires were distributed and collected bark after respondent answered is 73 except 12 on-collected. SPSS and PLS were used for data analysis, Also Reliability and Validity instrument were tested. Tam model were using to test the believed of staffs of HEIs in Nigeria based on this seven components, Quality of internet connection, Ease of used, ERP Feeling enjoyment, Security and Privacy, Usefulness, Amount of information and perception to use ERP. Also Regression and Correlation were analysis and lastly, relevant hypotheses was derived and tested by using PLS software, where three variables are rejected and three are supported. The contribution of this study to HEIs in Nigeria is to reduce the operational cost, save time, to provide student ease accessing online group discussion and improvement in term of learning quality.*

## Keywords:

*ERP, Implementation, PerceptionOf Use, HEIs, Decision Making and Nigeria.*

## 1.0 INTRODUCTION

Enterprise Resource Planning is the one of essential programming that can be actualized by choice making in Higher Education Institution in Nigeria, with a specific

end goal to be have one information framework for all offices in HEIs in Nigeria. An ERP is an Enterprise Resource Planning framework - a productive framework that methodologies organization wide exchanges on a solitary programming framework and a single database. These multi-useful frameworks are intended to streamline just about every part of how foundations work, simply put; an ERP coordinates institutional information and methods through one framework.

During the most recent decade, advanced education organizations have been confronted with the need to update or supplant developing machine programming frameworks, regularly alluded to a lay down frameworks, there is no more meet or help present innovation demanded. (Garcia-Sanchez and Pe'rez-Bernal, 2007). As requests for more intricate government and state information reporting expanded and new multi-grounds and virtual facilities situations obliged more powerful frameworks, the dominant part of legacy frameworks was no more ready to perform to the level required. (Mccredie and Updegrave, 1999). Other real motivation by making changes to incorporate the year 2000 (Y2k) programming limits and replacement desires for Web innovation, a zone most maturing legacy framework stages were not able to help (Nah, 2002; Oliver, 2005). The answer for various organizations that determination and execution of an Enterprise Resource Planning framework.

Organization of information in the vitality business environment has transformed into a convincing driver in execution of business techniques as it chooses various leveled advancement and reasonability (Siriginidi, 2007). With extended globalization, firms are facing extraordinary competition since they work in a nature's field (Watanabe, Hobo 2003). This has seen them placed enthusiastically in information structures in the effort of organizing and encouraging their activities for adequacy and sufficiency. Hence, most western countries around the globe have executed consolidated information systems known as Enterprise Resource Planning. Information all active deck affiliations is for the most part spread over different home get to be machined with differing information systems that house unique legitimate limits (Zhang, Lee, Huang, Zhang & Huang, 2005); these structure information islands that can scarcely help business structures in a mindful manner (Hendrickson

2010). In this manner, affiliations that need to manage their systems well oblige deviate wide structures that are fit for facilitating Enterprise business limits (Watanabe and Hobo 2003). Accordingly, Enterprise Resource Planning structures were made to address this issue.

Enterprise Resources Planning (ERP) structure is a business and configurable programming package that regulates and consolidates all the information traveling through the useful regions in the affiliation (Chen 2011). These fuse monies related, accounting, creation system and customer information, arrangements and scattering, creation masterminding, materials organization and human resources organization. ERP structure contains programming help modules where information is streaming amidst them and they confer a central database (Clemmons, Simon 2001).

### 1.1 Background of the Study

An ERP framework "refer to expansive business programming packages that guarantee a consistent combination of data course through an association by joining different wellsprings of data into a solitary or single programming application and a single database" These wellsprings of information may consolidate most of the budget, management and operational data delivered by a business. Going before the ERP inquire, information from each business limit was held in its particular programming application, and progressed instruction school was trying to unite these data sources to focus the information crucial for business organization and decision making (Davenport, 2000). ERP structures had their genesis in the gathering business and were known as MRP, (amassing resource masterminding).

Moving ahead with headway and arrangements for cutting edge training specific needs to realize the change of ERP systems appropriate to major operational zones, for instance, human resources, back and association, and limits specific to focused business undertakings, including progressed instruction. Present ERP structures operate by developed training are those that have been arranged by the venders concentrated around their authority to give best practice techniques specially crafted to specific industry operations. The composed, off-the-rack programming certifications "streamlined systems, better replacement organization, and, therefore, expanded the estimation of the association" (Siau&Messersmith).

Enterprise Resource Planning (ERP) is a thing approach that sets out business cut off focuses and data into a singular system to be surrendered inside a connection. While ERP began from social affair and creation masterminding examples used in the social undertaking business, ERP widened its advancement in the 1990's to other "back-office" limits, for instance, human Belonging, record and time arranging (Swartz & Orgill, 2001;

Nieuwenhuysse, Boeck, Lambrecht, & Vandaele, 2011). Additionally, starting late ERP has combined distinctive business improvement, for instance, time system affiliation and customer relationship to end up all the more convincing with, for instance, Supply Chain Management (SCM), Customer Relationship Management (CRM), Enterprise Performance Management (EPM), Human Capital Management (HCM), Sales Force Automation (SFA), Electronic Commerce (EC), Business Information Warehousing (BIW), Educational Students Systems and Virtual Learning Environment.

ERP institutionalizes systems and information inside an association with best practices. The affiliation in addition streamlines information streams between diverse parts of a business by making a one-trade diagram (Lieber, 1995). As Hitt, Wu, and Zhou (2002) imparted, "the composed and joined ERP programming environment gives a level of interoperability that was troublesome and strange to satisfy with stand-alone, uncommonly made structures." Standardization and coordination of methods and information permits a relationship to unite true blue exercises, enhances the capacity to pass on new data structure's support, and decreases data structure upkeep costs (Siau, 2004).

College or University is not precisely the same as assorted characterizations of business in light of the way that they have novel circumstances and conditions; and the ERP structures are there to satisfy the scholastic needs (Mehlinger, 2006). The educators and replacements need huge data and enhanced e nature. The enthusiasm driving acknowledging, ERP in schools is to outfit a foundation with a more unmistakable most extreme for examination and planning (Watson and Schneider, 1999).

The principal ideal circumstances of ERP for cutting edge training consolidate:

- Access to data for masterminding and developing the organization of the foundation.
- To upgrade organizations of workers, another employee and replacements.
- Cut transaction dangers.
- Better organization of school information.

### 1.2 Problem Statement

This study identifies the causes of education system failure and the problems of mismanagement in the Nigeria Higher education institution, due to not integrate technological solutions in HEIs will increase the operational cost, a lot of time talking and no transparent system, also related to perception of using ERP, such as –( Quality of Internet Connection, Ease of Used, ERP feeling Enjoyment, Security and Privacy, Usefulness and Amount of Information). Egbe Adewole-Odeshi(2014), Oye N, Noorminshah A. & NorZairah Ab. Rahim(2011), Suleiman A. Ahmad, & Yunusa Abubakar(2013).

This is the problem facing HEIs in Nigeria in term of technology and software. According to Suleiman A. Ahmad, & Yunusa Abubakar(2013).Enterprise resources planning (ERP) system integrated inside and outside administration, data across a main area of organization, embracing finance/ accounting, production, marketing and other areas of business organization, like customer relationship, etc.

ERP system managed all this activity in an integrated software application system (cam 2012 &Mazzoni 2013). The problem statement is to make the benefits of an ERP system for decision making and intends to use ERP in HEIN and the ability to quantify these benefits. HEIs in Nigeria by implementing ERP system will reduce the operating cost and time to be benefit from their ERP for effective decision making management system.

Addressing ERP skills shortages and human capital gaps in HEIN, is (the urgent need for qualified personnel) is the biggest problem facing Nigeria higher education institutions.

Enterprise Resource Planning (ERP) is the key enablers of today's improvement agenda and an important element in government efforts to foster knowledge-based economics and information societies.

It is a vicious circle the demand for ERP skills increasingly exceeds supply, and HEIN face an uphill struggle to train the workforce in order to sustain and develop their economies, and to become more competitive. There is a way of evaluating the ERP integrated, especially in developing countries. Ruby et al (2009) also makes the question as to adequacy assessment of ERP in the His parts. It is in this way, greatly backed to focus the accomplishment of ERP executions, on the grounds that a tremendous plan and human assets are contributed there.

### 1.3 Research Question

Quantitative study is characterized by structural design, where question and design structure questionnaires was designed and question was asked based on variables, the question is:-

1. Is there any relationship between qualities of internet connection with the perception to use the Enterprise Resources Planning (ERP) in higher education institutions in Nigeria?
2. Does their feeling of enjoyment to Perception to use ERP in higher education institutions in Nigeria?
3. What is the Security and Privacy threat with the perception to use ERP in higher education institutions in Nigeria?
4. Is there any Ease of Used complication with the perception to use ERP in higher education institutions in Nigeria?

5. How do you think Usefulness of perception to use ERP enhance the services of higher education institutions in Nigeria?
6. How do you think Amount of Information in perception to use ERP can generally receive enough information about ERP in higher education institutions in Nigeria?

## 2. 0 LITERATURE REVIEW

Discussion in this study were about the concept of Perception to use ERP related it to Quality of internet connection, ERP Feeling enjoyment, Security and privacy, Ease of use, Usefulness, Amount of information, issues relating Perception to use ERP for purpose of decision making. The systematic manner in literature review was conducted in unfold off and Perception to use decision making to implementation of an Enterprise Resource Planning (ERP) in higher education institutions in Nigeria.

As indicated by Markus and Tanis (2000) the study on ERP (endeavor asset arranging) for compelling choice making for an advanced education framework can add to impress to the generally speaking of the data framework in training or organization. (Davenport, 1998; Siau& Messer smith, 2003). Audit of writing in the accompanying way or territories, for example, budgetary division cost, specialized issue, managerial issue, data innovation office (IT) appropriation, utilize, and sway, integration. (Davenport, 1998; Siau& Messer smith, 2003).ERP (undertaking asset arranging) influence almost all parts of the advanced education framework for making decisions. Greece and Hull (2004) However, the decision is not just the above notice bit additionally all through their operational lives. This study furnishes a comprehend to existing exploration audit on ERP (endeavor asset arranging) advanced education framework for choice making. (Davenport, 1998; Siau& Messer smith, 2003).

Generally speaking, an assessment of ERP (undertaking asset arranging) was decently archived in numerous zone of analyst's literature. Gracie and Hull (2004) There were numerous contentions on history and the date that they were start up and practice of ERP (venture asset planning) (Davenportspeaking, onu& Messer smith, 2003). ERP framework had their genesis in programming created for the organization, association and assembling industry in the early year 1970's (Davenport, 1998; Siau& Messer smith, 2003). their answer were known as Continuing improvement and plans for particular needs brought about the proceed of ERP frameworks pertinent to major operational territories, for example, human assets, back and organization, and capacities particular to concentrated commercial ventures, including advanced institutions (Davenport, 1998; Siau& Messer smith, 2003).various of research has been done from previous literature which was concentrated about the utilized of the system and

development application system inside which is integrated the unite and department together(davenport, 1998; Siau& Messer smith, 2003). With most of the examination inspecting usage philosophies on how advanced education can utilize ERP for choice making as a part of their verity of office that they have in their organization by coordinate them together to turn into one unit of choice and make undertaking effectively open any time. Gracie and Hull (2004).

### **2.1 Higher Education, ERP Implementation**

Nothing to be absent in examining the particular of institution, Nielsen (2005) looked into momentum to use the ERP system as was stated from various of study on this implementation of ERP to achievement figures from amalgamation. Nielson(2005) connected those variables to the institution to implement the application to be used, a study can be made to explore the decision after the implement the usage of the ERP in their institution to compare it from the previous system Greci and Hull (2004). The study was limited by a structure created from the writing on data framework venture accomplishment and additionally studies to the usage ERP. The structure comprised these into the guideline: key variables, hierarchical setting, ERP framework quality, ERP execution quality, ERP venture degree, as well as client fulfillment to utilization. Referring to Yin (1994), Nielsen chose detailed analysis, research philosophy of the college examine and used preand post-usage meetings of directors, staff and replacements as the essential method for information accumulation. Extra data from optional sources and perceptions was likewise gathered Greci and Hull (2004).

### **2.2 ERP Benefits in College**

The incorporating regulatory capacities to use application of ERP are that have been backed by discrete legacy frameworks previously (Zornada&Velkavrh, 2005). Separate legacy frameworks which "dissimilar" prompted "copy assets and administrations" (Allen & Kern, 2001).ERP empowers He is to combine unique information and legacy frameworks and embrace best-of-breed procedures and present day innovation.

### **2.3 Perception to Use**

A few specialists (EIN-Dor and Segev 1978; Hamilton and Chervany 1981; Ives et al. 1980; Lucas 1975) have proposed "utilization" as an issue measure of data frameworks in the IS exploration settings. Having adopted from their thought, mean to use/ usage is seen as the essential marker of the achievement of ERP system assessment in the investigation. This is the immediate forerunners which seen the value, saw convenience, and subjective standard as depicted in the past segment. This examination except that the measure of utilization can have a positive effect on the level of client fulfillment and

additionally the opposite being valid from the view as Delone and Mclean's IS achievement model.

### **2.4 Quality of Internet Connect**

The quality of internet connection is lead to software and hardware work to access the connection together.Greci and Hull (2004). It is a many-sided development a variation proposed as comprehend the work of framework by in fact and by method for outline (Gable et al, 2008). Framework the value of connection to the internet is viewed to broadest contemplated elements as indicated by Delone and McLean (1992).

### **2.5ERP Feeling Enjoyment**

Enjoyment is defined as the extent to which the activity or services offered by the LMS and is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated (van der Heijden, 2004).Client Satisfaction The writing demonstrates that client fulfillment is the a standout amongst the most broadly utilized achievement measures of data framework achievement (Delone and McLean 1992).

### **2.6Security and Privacy**

Distinguishing and confirmation – The obligation of data security inside an ERP framework is to guarantee that the ERP framework is just getting to use new technology, approve the client's mind set of security and privacy. Martins [2003]. Approval – One of the most segregating perspectives to consider inside ERP security which is keeping the right to addition, passage rights and exercises of the customers inside the ERP application.

### **2.7Ease of Use**

Ease of use is characterized as "the extent to which the prospective client anticipates that the target framework will be free of exertion (Davis et al. 1989). It is seen as an issue some piece of the specific nature of an information system (Davis and Olson 1985). It is directed by a couple of arrangement issues, including screen plan, customer interface, page organization, shade, images, help workplaces, menus, customer documentation, and on-screen prompts (Burch and Grudnitski 1989).

### **2.8Usefulness**

Performance expectancy (perceived usefulness). In UTAUT, execution hope is characterized as the extent to which an individual accepts that utilizing the technology, which they can perceive benefit to them in order to add value to their work(Venkatesh et al., 2003).Its can be Component was gotten from the apparent helpfulness figure as proposed in TAM. As told by Davis (1989). A framework that is highly in PU is one that the client accepts will lessen his or her errand ambiguities and in the long run builds work-related execution (Davis, 1989; Venkatesh and Davis, 2000; Amoako-Gyampah, 2007).



## 2.9 Amount of Information.

ERP programming re intended for organizations that work in a wide mixture of territories. It joins with countless components into a solitary unit. Three of the most crucial ERP gadgets open to collecting, resources, and store(Cameron and Meyer,1998; Clemons, 1998; Davenport, 2000).The fund devices permit organizations to effectively keep up their budgetary data like that of the advantages, records, plan and money. ERP can likewise support an organization in overseeing interior and additionally outside components influencing it.

## 2.10 Theory of Reasoned Actions (TRA)

Theory of reasoned action (TRA) is processed which individual can reason for different any action to perceive and basic hypotheses of human conduct in social brain science setting (Venkatesh et al., 2003). TRA at first introduced by Fishbein and Ajzen in 1975. TRA proposes an individual's shown behavior is controlled by his or her behavioral arrangement which is managed by the singular mindset and subjective benchmarks (Fishbein&Ajzen, 1975).

## 3.0 RESEARCH METHODOLOGY

Discussed in this chapter is about a method utilized to examine the relationship between the variables, which they're independent variables and the dependent variable. The chapter further outlines the theoretical framework, population and sample, research design, hypothesis development, sources of data, data collection, measurement and instrumentation and data analysis. Finally, the summary of the procedure is discussed.

### 3.1 Population and Sampling Size

For section analysis of this research is at the level of population comprises of workers of higher education institution employed of Nigeria. These workers were employed in the various departments of the higher education institution of Nigeria. The workers' positions range from a departmental level and the system of higher education. The workers were obtained from the various institution departments of the HEIs in Nigeria for purpose of this study.The UUM, USM and UNIMAP final year student Masters and Phd postgraduate student that they're Nigeria HEIs workers back home are using as population for this study,which they consist 100 population.Base on the table 3. According to krejcie and morgan (1970). If the population is 100, the researcher can have 80 respondent to proceed for the data collection, so i used 85 as my respondent on this study,out of 100 population. The workers consist of 85 Nigerians; both are Yoruba, Hausa and Igbo,but 73 questionnaire are later collected,why 12 are uncollected. There were males and female workers employed by various HEIs Nigeria.

### 3.2 Theoretical Framework

Conceptual structure for this research is determined after carefully studied the research questions, aims and study of relevant literature in the past chapter. Hence, the structure focuses based on the Enterprises Resources Planning (ERP) System that could have impacted on the implementation of ERP in Perception to use it in decision making among management and other workers in the higher education institution in Nigeria.

The independent variables are Quality of Internet Connect, ERP Feeling Enjoyment, Security and Privacy, Ease of Used, Usefulness and Amount of Information, while Perception to use ERP for the purpose of decision making among the workers is used as dependent variable, The study framework of this research study is here as follows:

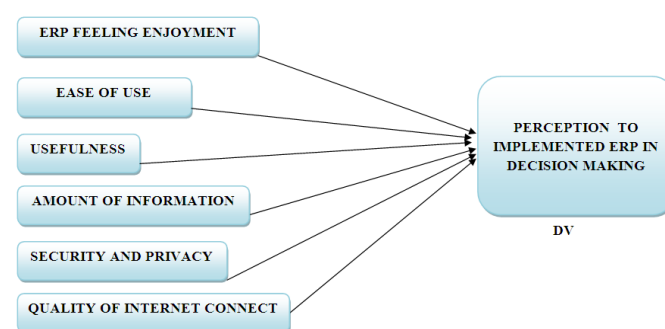


Figure 1: Research Models

### 3.3 Formulation of Hypothesis

**H1:Quality of Internet Connect:** There is relationship that link Quality of Internet Connect to Perception to use ERP for decision making in higher education institution in Nigeria.

**H2: ERP Feeling Enjoyment:** There is relationship link ERP feeling enjoyment to Perception to use ERP for decision making in higher education institution in Nigeria.

**H3: Security and Privacy:** There is impact that link security and privacy to Perception to use ERP for decision making in higher education institution in Nigeria.

**H4: Ease of Use:** There is impact that link Ease of used have a relationship to perception to use ERP for decision making in higher education institution in Nigeria.

**H5: Usefulness:** There is relationship that link usefulness to perception to use ERP for decision making in higher education institution in Nigeria.

**H6: Amount of Information:** There is relationship that link amount of information to perception to use ERP for decision making in higher education institution in Nigeria.

### 3.4 Research Design

In order to accomplish the study aims, a survey method questionnaire was used to elicit information from respondents who are the workers of higher education Institution in Nigeria.

### 3.5 Sources of Data

Primary data were used for this research. Primary data backward to report that is firstly obtained by the investigator on the variables of concern for the specific perception of the research. For the perception of this research, the primary data were acquired through the distribution of questionnaires to the workers of higher education institution in Nigeria.

### 3.6 Data Collection

For this research, data were collected by exploring a structured of a questionnaire which contained items. The questionnaires were distributed to 85 workers of higher education institution in Nigeria. These questionnaires were collected after answering it finished to the researcher when it was completed.

### 3.7 Measurement and Instrumentation

The proposed instrument for this research is an organized questionnaire which planned to examine the factors that effect on Perception to use ERP for decision making in higher education institution in Nigeria. Further transformation was made to the questionnaire to suit the context of workers in HEIs in Nigeria. Since the study was conducted on workers, the consent of agreement portion has been omitted. The survey questionnaire comprised of various departments.

Every variable were measured with a few things got from earlier research and altered to fit the setting of internet saving money. Those variables it as measured by using a 5-point Likert-short scales tied down by 1 (emphatically deviate) to the 5 (Strongly concur). To determine they have past experience, respondents were solicited to name one of the online banks they utilized.

**Security and Privacy.** The fluctuations were measured utilizing five adjusted.

**Ease of use.** It was measured utilizing six things items.

**Usefulness.** It was measured utilizing six things adjusted.

**Amount of information.** It was measured utilizing five items adjusted.

**Perceived enjoyment.** It was measured utilizing six things adjusted.

**The quality of internet connection.** It was measured utilizing nine things, three received from Wole olatokun and Olalekan Joseph Owofe Africa Regional Center for Information Science (2012). Three received by Yeung Kit Man (2006). Three embraced from our instructor Mr. Masuri (2012).

**Perception to use.** It was measured utilizing five things, two received from Mr. Masir and three embraced from Yeung Kit Man (2006).

Part B Section A to G soliciting respondent's opinion about their perception to use ERP in higher education institutions in Nigeria. Respondent answered all items to indicate their overall ERP implementation in higher education institution in Nigeria. The layout of the instrument is given in Table 1 below as:

Table 1.

Section	Variable	No. of items
PART B		
Section A	Perception to use	5
Section B	Quality of Internetconnect	9
Section C	ERP feeling enjoyment	6
Section D	Security and privacy	5
Section E	Ease of use	6
Section F	Usefulness	6
Section G	Amount of information	5

Two scales were utilized for things estimation as a part of this study. To start with, ostensible scale utilized as a part of Part A with one hand. Then again, Part B obliged respondents to rate Items on a five-point Liketshort scales running from 1=strongly disagree, 2=disagree, 3=neutral, 4= Agree and 5= Strongly agree.

## 4.0 RESEARCH ANALYSIS AND FINDINGS

Discussed in this chapter will show the detail about this analysis and outcome from the smartpls. There are several stages in this analysis such as respondent age, their education, years of service in their work and their department. The next is analysis on finding from smartpls to explain in detail about reliability and validity in this study.

### 4.1 Overview of Collected Data

The figure of the respondents was 85 people that were participating in this study. 85 questionnaires were distributed to the UUM, USM and UNIMAP final year Masters and Phd postgraduate student of HEIs workers back home in various higher education institutions in Nigeria. Some of the questionnaire wasn't returned back, only 73 were collected and 12 were uncollected or missing.

### 4.2 Statistical Analysis and Findings

I used this two software for data analysis for this study, which are: (SPSS & PLS) Structural Equations Modeling Partial Least Squares (PLS) approach was used SmartPLS 2.0 to establish the measurement validity and reliability

before the model has been examined and the hypotheses have been tested.

#### 4.2.1 The Construct Validity

According to (Chow & Chan, 2008), The Construct Validity related to the measure refers to the level of extent at which the items generated for the purpose of measuring a construct can appropriately measure the concept they were designed to measure (Hair et al., 2010). To be more specific, the total items designed for the purpose of measuring a construct must load higher on their respective

construct than their loadings on the other constructed. Clearly, the results indicated the construct validity of the measures used as illustrated in two ways.

Firstly, the items shows high loading on their respective constructs when compared to other constructs. Secondly, the item loadings were significantly loading on their respective constructs confirming the Construct Validity related to the measures practiced in this study as stated in Table2 (Chow & Chan, 2008).

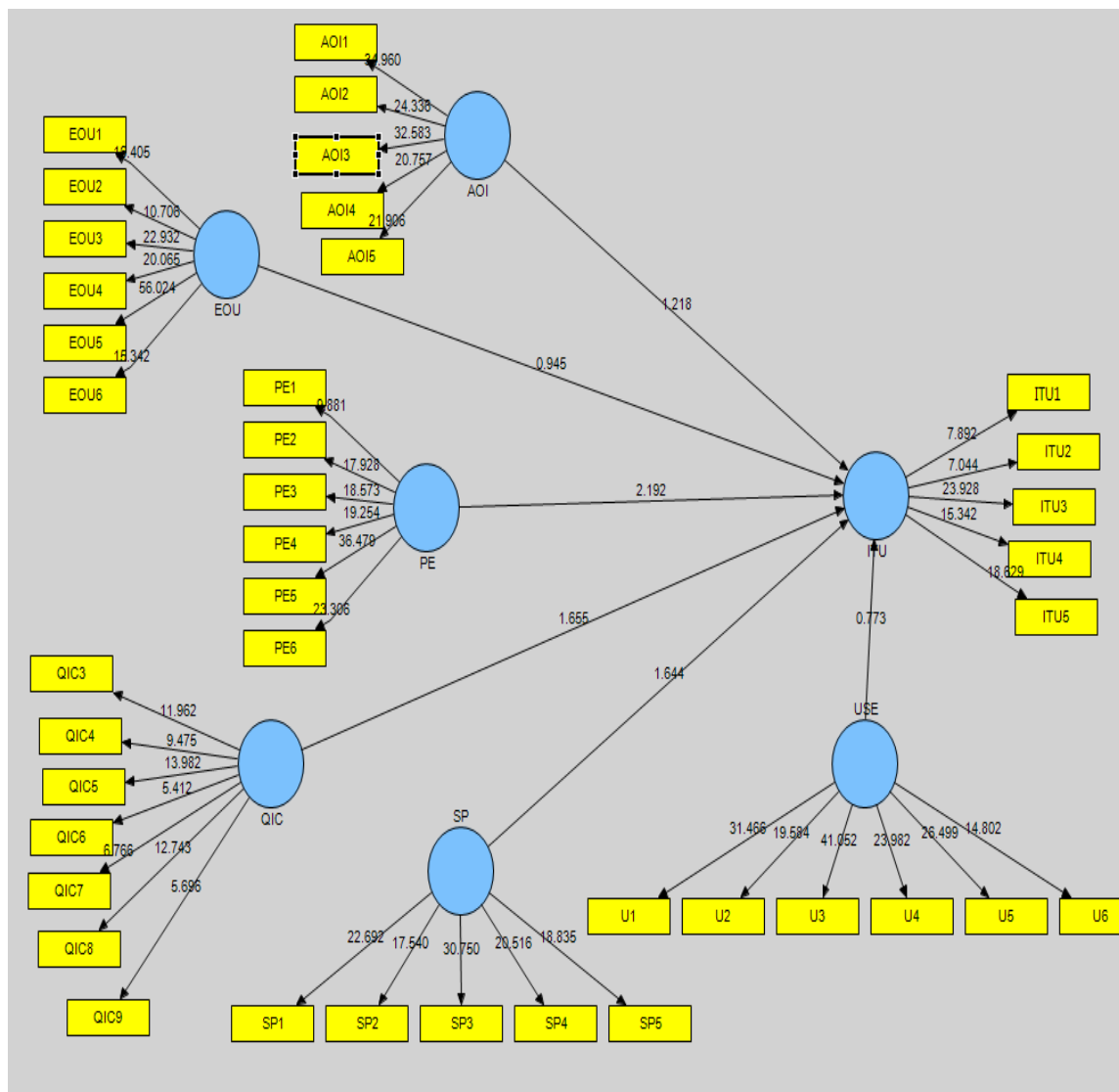


Figure 2 shows by the way it is usual practice in the literature, I established the construct validity and reliability by the measurement analysis before the hypotheses have been examined.

#### 4.3 Model measurement

The content and the construct validity will be confirmed after the model of goodness measured by the following:

##### 4.3.1 The Content Validity

The Construct Validity connected with the measure refer to the degree at which the items developed with the objective of measuring a construct can properly measure the idea they were planning to measure (Hair et al.,

2010).therefore, the aggregate things intended for the reason for measuring a build must burden Greater on their particular develop than their loadings rather to the similar construct. Chow & Chan, (2008).Obviously, the construct validity is indicated the results showed in Table 2 & 3 the measures utilized as outlined as parts into two listed

below. Part one, loadings of items demonstrates high on their individual constructs when contrasted with other constructs. Besides, the items were fundamentally loading on their separate constructs affirming the Construct Validity identified with the measures honed in this study as indicated in both.

Table 2 Factor Analysis/Cross Loading

	AC	EP	JS	OC	SI
AC1	<b>0.865</b>	0.193	0.066	0.205	0.240
AC2	<b>0.854</b>	0.188	0.027	0.186	0.220
AC3	<b>0.876</b>	0.180	0.015	0.230	0.249
AC4	<b>0.886</b>	0.235	0.072	0.266	0.255
EP1	0.175	<b>0.768</b>	0.169	0.282	0.410
EP2	0.215	<b>0.865</b>	0.170	0.423	0.446
EP3	0.190	<b>0.840</b>	0.194	0.348	0.370
EP4	0.189	<b>0.867</b>	0.179	0.387	0.436
JS1	0.012	0.116	<b>0.782</b>	0.167	0.123
JS2	-0.009	0.195	<b>0.797</b>	0.108	0.147
JS3	0.035	0.166	<b>0.760</b>	0.127	0.171
JS4	0.046	0.138	<b>0.761</b>	0.119	0.150
JS5	0.106	0.201	<b>0.815</b>	0.185	0.194
OC1	0.113	0.214	0.088	<b>0.676</b>	0.199
OC2	0.301	0.397	0.167	<b>0.901</b>	0.502
OC3	0.149	0.389	0.159	<b>0.776</b>	0.282
OC4	0.226	0.382	0.162	<b>0.884</b>	0.431
SI1	0.240	0.412	0.176	0.398	<b>0.864</b>
SI2	0.239	0.433	0.155	0.433	<b>0.897</b>
SI3	0.220	0.399	0.151	0.329	<b>0.810</b>
SI4	0.264	0.475	0.218	0.430	<b>0.892</b>

Quality of Internet Connection, Ease of Used, ERP feeling Enjoyment, Security and Privacy, Usefulness, Amount of Information.

Table 3 Factor Loading Significance

Construct	Item	Loadings
AC	AC1	0.865
	AC2	0.854
	AC3	0.876
	AC4	0.886
EP	EP1	0.768
	EP2	0.865
	EP3	0.840
	EP4	0.867
JS	JS1	0.782
	JS2	0.797
	JS3	0.760
	JS4	0.761
	JS5	0.815
OC	OC1	0.676
	OC2	0.901
	OC3	0.776
	OC4	0.884
SI	SI1	0.864
	SI2	0.897
	SI3	0.810
	SI4	0.892

#### 4.3.2 The Convergent Validity

Convergent validity refers to a level of extent which a set of variables converges or joins in measuring a specific idea (Hair et al., 2010). Convergent validity can be setup in series of criteria, namely the component loadings, composite reliability (CR) and the average variance extracted (AVE) were utilized all the while as proposed via Hair et al. (2010). In doing that, the loadings of items were analyzed and all the items have loadings more than 0.5 which is the worthy level proposed in the multivariate investigation writing (Hair et al., 2010)further more, Table 4 demonstrates that all the components of loadings were critical at the 0.01 level of significance.

The second part of the convergent validity is the composite reliability, which demonstrates the extent to which a set of seat reliably demonstrate the dormant construct (Hair et al., 2010). The procedure was then to analyze the composite reliability values as line up in Table 4. It can be recognized that the composite reliability qualities ran from 0.66 to 0.91 which surpasses the suggested estimation of 0.7 (Fornell&Larcker, 1981).



These results affirm the convergent validity of the external model..

As shown in Table 4 the composite reliability values in a range of 0.891 to 0.938 which exceeds the pre-set value, i.e. 0.7 (Fornell&Larcker, 1981; Hair et al., 2010). As well

as, the AVE (average variances extracted) values ranging from 0.541 to 0.751 is trying to illustrate a good level of construct validity related to the used measures (Barclay et al., 1995). The convergent validity of the remaining model is confirmed from these outcomes.

**Table 4:Convergent**

Item	Construct	AOI	Cronbachs Alpha	Composite Reliability	Average Variance extracted
AOI1	AOI	0.876837	0.91765	0.937906	0.751335
AOI2		0.86472			
AOI3		0.88299			
AOI4		0.857767			
AOI5		0.851267			
EOU1	EOU	0.815712	0.921925	0.938884	0.719929
EOU2		0.769402			
EOU3		0.876923			
EOU4		0.886062			
EOU5		0.925039			
EOU6	PTU	0.80772	0.855961	0.896907	0.636034
PTU1		0.732482			
PTU2		0.744769			
PTU3		0.875681			
PTU4		0.806678			
PTU5	PE1	0.819397	0.910543	0.930723	0.691652
PE1		0.758089			
PE2		0.826131			
PE3		0.859497			
PE4		0.834919			
PE5	QIC	0.862104	0.868158	0.891419	0.541005
PE6		0.84479			
QIC3		0.761204			
QIC4		0.778132			
QIC5		0.783737			
QIC6	SP1	0.656447	0.897116	0.923825	0.708505
QIC7		0.753747			
QIC8		0.751879			
QIC9		0.650761			
SP1		0.867782			
SP2	U1	0.800224	0.923983	0.94048	0.708505
SP3		0.899501			
SP4		0.834653			
SP5		0.802107			
U1		0.866173			
U2	U1	0.841039	0.923983	0.94048	0.708505
U3		0.899516			
U4		0.870245			
U5		0.835385			
U6		0.79286			

a:  $CR = (\sum \text{factor loading})^2 / \{(\sum \text{factor loading})^2 + \sum (\text{variance of error})\}$

b:  $AVE = \sum (\text{factor loading})^2 / (\sum (\text{factor loading})^2 + \sum (\text{variance of error})\}$

### 4.3.3 The Discriminant Validity

Define meaning of discriminate validity is the level at which a set of component have the adequacy to recognize one construct to another. Meanwhile, variance to construct was shared by suppose to be higher when we compared to variance shared of constructing to others which was criteria recommended with objective to analyze the discriminant validity, as it was shown in Table 5, the detail of square root which is same as AVE

(average change concentrated) are consistently viewed as slanting components and the variable relationship is given at components. In the event that the line of column components is generally considered higher than the components in other off corner to corner in their related columns and line up at that point we can make the correlation and expect the discriminant validity. Additionally, the result of the connection grid clarified in Table 5 verifies the confirmation of discriminant validity.

Table 5 Correlations among constructs and discriminant validity

	AOI	EOU	PTU	PE	QIC	SP	USE
AOI	<b>0.867</b>						
EOU	0.632	<b>0.848</b>					
PTU	0.603	0.569	<b>0.798</b>				
PE	0.658	0.804	0.686	<b>0.832</b>			
QIC	0.671	0.596	0.594	0.601	<b>0.736</b>		
SP	0.532	0.673	0.600	0.681	0.548	<b>0.842</b>	
USE	0.588	0.721	0.591	0.745	0.507	0.683	<b>0.852</b>

### 4.3.4 Goodness of Fit (GoF) of the Model

Goodness of fit is measured and analyze by PLS Structural Equation Modelling which it was characterized by Tenenhaus et al. (2005), PLS path modelling is for a globally fit measure (GoF) is the geometric mean of the average R<sup>2</sup> for the endogenous constructs and the constructs average commonality. Hence, the integrity of fit measure represents the change separated by both external and internal models. To backing the validity of the PLS model, Gof was evaluated as indicated by the principles set up by Wetzels, Odekerken-Schroder, and Van Oppen (2009) as given in the accompanying below formula:

$$Gof = \sqrt{(R^2 \times AVE)}$$

Especially, the Gof estimation of this model was discovered to be 0.618 which is viewed as vast at the point when contrasted with the gauge qualities (little =0.1, medium =0.25, vast =0.36). The results demonstrated that the model goodness of fit measure which is base in view

of the average variance clarified is greater which show a satisfactory level in Table 6.

Table 6

Construct	R Square	AVE	GOF
AOI		0.751	
EOU		0.720	
PTU	0.559	0.636	
PE		0.692	
QIC		0.541	
SP		0.709	
USE		0.729	
Average	0.559	0.682	0.618

### 4.3.5 The Structural Model and Hypothesis Testing

After the construct validity and construct reliability have been designed, the following step was analysis of this study by testing the hypotheses result through the PLS programming which has Algorithm and Bootstrapping Algorithm in Smartpls 2.0. The results were accounted for as in Figure 2, Figure 3, and Table 7.

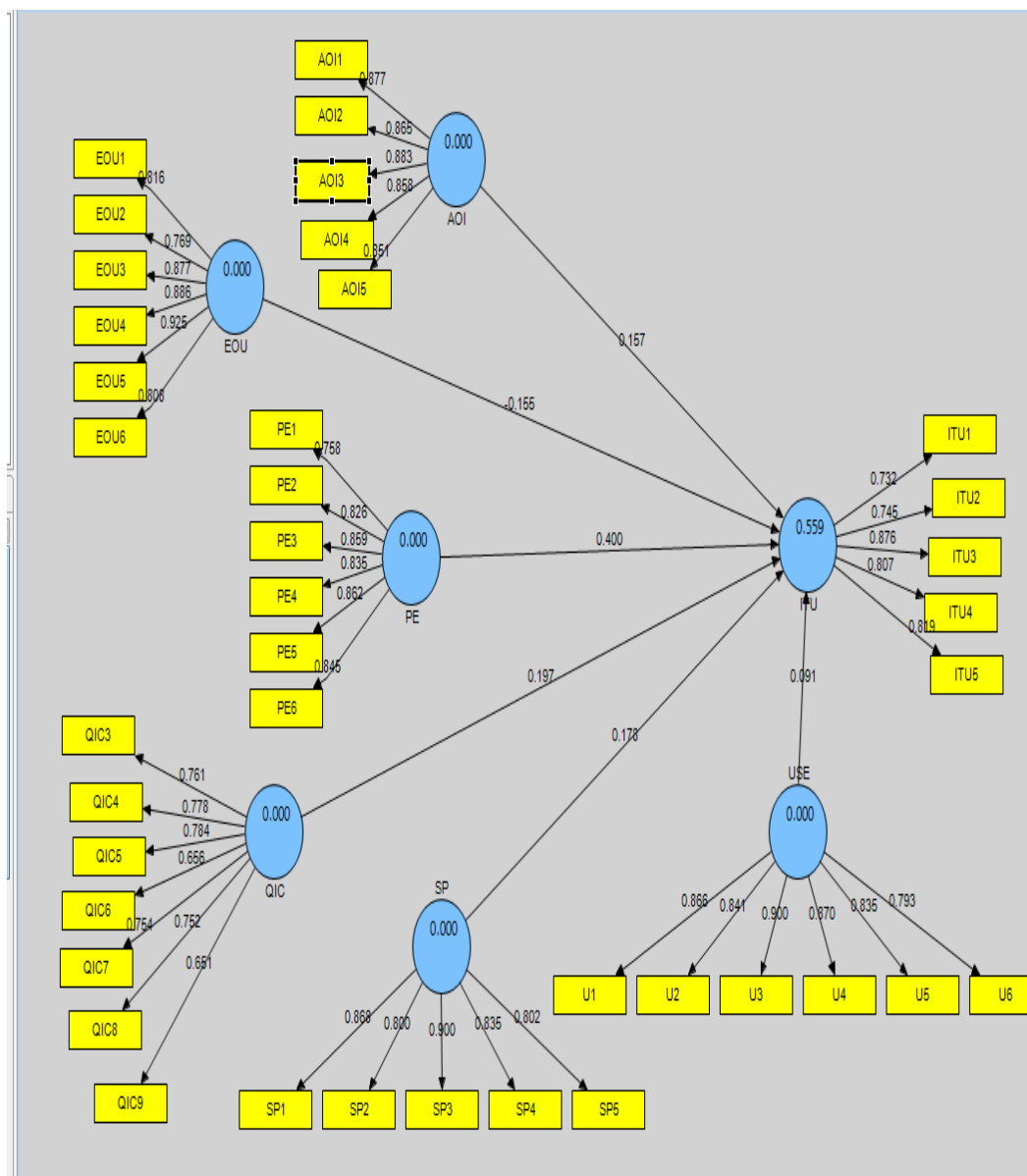


Figure 3 Items loadings and path coefficient

Table 7 Hypothesis Testing inner modeling Analysis

NO	Hypothesized Path	Path coefficient	Standard Error (STERR)	T Value	P Value	Decision
1	AOI ->PTU	0.133985	0.128889	1.217774	0.112	Not supported
2	EOU -> PTU	-0.171096	0.163909	0.944825	0.173	Not Supported
3	PE -> PTU	0.39414	0.182655	2.19237	0.014	Supported
4	QIC -> PTU	0.221807	0.118963	1.65489	0.049	Supported
5	SP -> PTU	0.181858	0.108441	1.643551	0.050	Supported
6	USE -> PTU	0.109195	0.117187	0.77304	0.220	Not Supported

\*\*\*:p<0.001; \*\*:P<0.01,\* :P<0.05

The way is stated in Figures 2, 3 and Table 7 AOI has a NEGATIVE and significant effect on the PTU at the 0.001 level of significance ( $\beta=0.133985$ ,  $t= 1.217774$ ,  $p>0.001$ ). The results also show that EOU have a positive and significant effect on the PTU at the 0.001 level of significance ( $\beta=0.171096$ ,  $t= 0.944825$ ,  $p<0.001$ ). The results also show that PE have a positive and significant effect on the PTU at the 0.001 level of significance ( $\beta=-0.39414$ ,  $t= 2.19237$ ,  $p>0.001$ ). The results also show that QICT have a positive and significant effect on the PTU at the 0.001 level of significance ( $\beta=0.221807$ ,  $t= 1.65489$ ,  $p<0.001$ ). The results also show that SP have a positive and significant effect on the PTU at the 0.001 level of significance ( $\beta=-0.181858$ ,  $t= 1.643551$ ,  $p<0.001$ ). Similarly, the USE has a NEGATIVE and significant effect on the levels of PTU at the at the 0.001 level of significance ( $\beta=0.109195$ ,  $t= 0.77304$ ,  $p<0.001$ ). Therefore, these results supported the hypotheses of the study H3, H4 and H5 as developed in the study.

#### 4.3.6 Result of Hypothesis

The formulated hypotheses are hereby tested below:

Summary of Hypothesis Testing Results Hypothesis Testing

**H1:** Amount of information has impacted on perception to use ERP for decision making in HEIN REJECTED

**H2:** Ease of use has impacted on perception to use ERP for decision making in HEIN REJECTED

**H3:** ERP Feeling enjoyment has an impact on the perception to use ERP for decision making in HEIN SUPPORTED

**H4:** Quality of internet connects have an impact on the perception to use ERP for decision making in HEIN SUPPORTED

**H5:** Security and privacy have an impact on the perception to use ERP for decision making in HEIN SUPPORTED

**H6:** Usefulness has an impact on the perception to use ERP for decision making in HEIN REJECTED.

This chapter discussed the results of the study. Findings from the study Indicated that quality of internet connection, ERP feeling enjoyment and security and privacy they're determinant of perception to use ERP in various HEIN. Further discussions on the findings will be presented in Chapter Five.

## 5.0 CONCLUSION AND RECOMMENDATIONS

The findings of this study corroborate the findings of previous research on the impact of Quality of internet

connect, ERP feeling enjoyment and security and privacy. For example, studies done by (Venkatesh and Davis 2000), (Burch and Grudnitski 1989), Markus and Tanis (2000), (Davenport, 1998; Siau & Messer smith, 2003), Petrescu and Simmons (2008), Edgar and Gear (2005), (Ramayah, Ignatius & Aafaqi, 2003), Bloom (1999), Mani (2002) shown that there exists a strong relationship between quality of internet connect, ERP feeling enjoyment and security and privacy. Results from other studies, have continued to support that quality of internet connect and ERP feeling enjoyment is one of the strongest determinants of employee attitudes, motivation and user interest Markus and Tanis (2000), (Gerhart and Milkovich, 1992). Appropriate allocation of quality of internet connects, ERP feeling enjoyment and security and privacy structure was also said to have a significant impact on the Perception to use ERP for decision making in higher education institutions (e.g., Markus, 2000, Tanis, 2000; Gerhart, 1992; May *et al.*, 2002).

Rejection of three other hypotheses (except H3, H4 and H5) in this study concluded that all other Perception to use ERP for decision making in (HEIN) did not significantly influence Perception to use ERP in (HEIN). The rejection suggested that the findings of this study could not support the findings presented in Chapter 2, such as *al.*, 1991, (Holland and Light, 1999). Fernandez, 1992, Hunter and Schmidt, 1982, Neumann *et al.*, 1989, Jones *et al.* 2009, Fried and Ferris, 1987, Cropanzano and Folger, 1996, Shianget *al.*, 2009, Trevino and Weaver, 2001 Pohlen and Roolah, 2006; which found that Amount of information, ease of use and Usefulness were significantly related to Perception to use ERP for decision making in HEIN.

The purpose of this study has been fulfilled with both the research questions answered and research objectives achieved, despite the proposed model marginally explained the variation percentage of the independent variables on the dependent variable, namely, the Perception to use ERP for decision making in higher education institutions in Nigeria HEIN. Further study has been suggested to explore other predictors that may contribute to the Perception to use ERP in the business organizations or higher education institutions.

Further to that, the analysis and results of the study shown that Quality of internet connection, ERP feeling enjoyment and Security and privacy they're integrated enterprise resource planning (ERP) that affect staff's Perception to use ERP in higher education institutions in Nigeria (HEIN). Therefore, HEIN should channel more effort and resources an integrated its ERP policy on Security and privacy, quality of the internet connection structure. This could bring great impact on the level of Perception to use ERP in higher education institutions, which may ultimately enhance the staff's commitment,



reducing cost, save time, staff turnover, increase productivity and improve organizational performance.

## **5.2 Contribution of Study**

The contribution to the study of this research is clearly understood that three of the independent variable are significantly to the dependent variable, which show that they have impacted on this study very well. the three independent variable that supported by hypothesis testing are: Quality of internet connection, ERP Feeling enjoyment and Security and Privacy, they are positively supported Perception to use ERPs in higher education institutions in Nigeria.

### **5.2.2 Contribution to Higher Education in Nigeria**

The contribution of this study to higher education institutions in Nigeria is to integrated all department in the school with one or a single software, which is Enterprise Resource Planning (ERP) in other to link all the school activities together and all information to be linking together. This study contribution to higher education institutions in Nigeria in terms of (operational cost reduction, save time, ease learning asses for student, online group work discussion among student and workers generally. It will provide data consistent and student service easily.

## **5.3 Recommendations for future study**

Based on a literature review of integrated Enterprise resource planning (ERP) and perception to use, a proposed study model was developed for this study. A total of six factors in integrated ERP for decision making were used as independent variables, while intending to use ERP in HEIN was used as the dependent variable. Apart from the recommendations for future study explained in the managerial implications section, the researcher would also like to propose a longitudinal study design for further study to determine the influence of integrated ERP perception to use for decision making purposes in higher education institutions on academics and non-academics, staff or organization workers, etc. Longitudinal data obtained over time would likely produce probable causation rather than association.

## **REFERENCES**

- [1] Oye, N. D., Noorminshah, A., & NorZairah, Ab. Rahim. (2011). Journal of Emerging Trends in Computing and Information Sciences. VOL. 2, NO. 10, October.
- [2] Suleiman, A. Ahmad., Yunusa, Abubakar., & Jacob, Itse., Dabo. (2013). ISSN: 2186-845X ISSN: 2186-8441 Print Vol. 2. No. 1. January.
- [3] Egbe, Adewole., Odeshi. (2014). Library Philosophy and Practice (e-journal) .
- [4] Adesina, Aderonke., A. (2010). Journal of Internet Banking and Commerce, April 2010, vol. 15, no.1.
- [5] I, O. Akinyemi., E, O. Asani., & A, A. Adigun. (2013). Journal of Emerging Trends in Computing and Information Sciences. Vol. 4, No.12 December.
- [6] Axline, S., Petrie, D., & Tanis, C. (2000). Learning from adopters' experiences with ERP problems encountered and success achieved. *Journal of Information Technology*, 15, 245-265. doi: 10.1080/02683960010008944.
- [7] Agarwal, R. (2000). Individual acceptance of information technologies. In R. W. Zmud (Ed.), *Framing the domains of IT management: Projecting the future through the past* (pp. 85-104). Cincinnati, OH: Pinnaflex Educational Resources.
- [8] Aladwani, A. M. (2001). Change management strategies for successful ERP implementation. *Business Process Management Journal*, 7(3), 266-275. Retrieved from ABI/INFORM Global database.
- [9] Bancroft, N. H., Seip, H., & Sprengel, A. (1998). *Implementing SAP/R3* (2nd ed.). Greenwich, CT: Manning.
- [10] Barrett, M., Gallagher, K., Worrell, J., & Gallagher, V. C. (2007, April). *Planning for post-implementation: Strategies, structures, and staffing*. Paper presented at the HEUG Alliance Conference, Orlando, FL.
- [11] Bendoly, E., & Cotteleer, M. J. (2008). Understanding behavioral sources of process variation following enterprise system deployment. *Journal of Operations Management*, 26, 23-44. doi: 10.1016/j.jom.2007.03.002.
- [12] Davenport, T. H. (1998). Putting the enterprise into the enterprise system. *Harvard Business Review*, 76(4), 121-131.
- [13] Davenport, T. H. (2000). *Mission critical: Realizing the promise of enterprise systems*. Boston: Harvard Business School Press.
- [14] Dery, K., Grant, D., Harley, B., & Wright, C. (2006). Work, organisation and enterprise resource planning systems: *An alternative research agenda*. *New Technology, Work and Employment*, 21(3), 199-214.
- [15] Dewey, B. I., & DeBlois, P. B. (2006a). Current IT issues survey report, 2006. *EDUCAUSE Quarterly Magazine*, 29(2), 12-30.
- [16] Dewey, B. I., & DeBlois, P. B. (2006b, May/June 2006). Top-10 IT issues. *EDUCAUSE Review*, 41, 58-79.
- [17] Ferratt, T. W., Ahire, S., & De, P. (2006). Achieving success in large projects: Implications from a study of ERP implementations. *Interfaces* 36(5), 458-469. Retrieved from Business Source Premier database.
- [18] Fichman, R. G. (2000). The diffusion and assimilation of information technology acceptance. In R. W. Zmud (Ed.), *Framing the domains of IT*

- management: Projecting the future through the past* (pp. 105-128). Cincinnati, OH: Pinnaflex Educational Resources.
- [19] Fowler, A., & Gilfillan, M. (2003). A framework for stakeholder integration in higher education information systems projects. *Technology Analysis & Strategic Management*, 15(4), 467-489.
- [20] Greci, R. T., & Hull, B. Z. (2004). New dog, old tricks: ERP and the systems development life cycle [Electronic version]. *Journal of Information Systems Education*, 15(3), 277-286.
- [21] Hawking, P., Stein, A., & Foster, S. (2004). *Revisiting ERP systems: Benefit realisation*. Paper presented at the 37th Hawaii International Conference on System Sciences, Hawaii.
- [22] Hawkins, B. L., & Barone, C. A. (2003). Assessing information technology: Changing the conceptual framework. In P. A. McClure (Ed.), *Organizing and managing information resources on your campus* (pp. 129-145). San Francisco: Jossey-Bass.
- [23] Holland, C. P., & Light, B. (2003). A framework for understanding success and failure in enterprise resource planning system implementation.
- [24] Jacobs, F. R., & Bendoly, E. (2003). Enterprise resource planning: Developments and directions for operations management research. *European Journal of Operational Research*, 146(2), 233-240.